

WHAT IS CLAIMED IS:

1. An image pickup apparatus comprising:

an image pickup region where a plurality of pixels which include photoelectric conversion units are

- 5 arranged to pick up an object image by dividing the object image into a plurality of regions; and

a scan circuit arranged between said plurality of photoelectric conversion units in said image pickup region to commonly process the plurality of pixels

- 10 or/and signals from the plurality of pixels.

2. An apparatus according to claim 1, wherein said scan circuit comprises a vertical scan circuit.

- 15 3. An apparatus according to claim 1, wherein said scan circuit comprises a horizontal scan circuit.

4. An apparatus according to claim 1, wherein said scan circuit comprises a shift register.

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5. An apparatus according to claim 4, wherein the shift register is of static type.

- 25 6. An apparatus according to claim 1, wherein said scan circuit comprises a decoder.

7. An apparatus according to claim 1, wherein

said scan circuit occupies an entire area per one pixel region.

8. An apparatus according to claim 7, wherein
5 said scan circuit is arranged on pixels apart from each other.

9. An apparatus according to claim 1, wherein
10 said scan circuit occupies a partial area per one pixel region.

10. An apparatus according to claim 1, wherein
said scan circuit comprises vertical and horizontal
scan circuits, and the vertical scan circuit is bent so
15 as not to cross the horizontal scan circuit.

11. An apparatus according to claim 1, wherein
said scan circuit comprises vertical and horizontal
scan circuits, and the horizontal scan circuit is bent
20 so as not to cross the vertical scan circuit.

12. An apparatus according to claim 1, wherein
said scan circuit is provided on a plurality of rows or
columns basis in a column or row direction.

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13. An apparatus according to claim 1, wherein the
scan circuit includes circuits which are arranged on a

18. An apparatus according to claim 16, further comprising an amplifier arranged between the plurality of photoelectric conversion units to amplify signals transferred to the horizontal output line.

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19. An apparatus according to claim 16, wherein said common processing circuit occupies an entire area per one pixel region.

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20. An apparatus according to claim 19, wherein said common processing circuit is arranged on pixels apart from each other.

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21. An apparatus according to claim 16, wherein said common processing circuit occupies a partial area per one pixel region.

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22. An apparatus according to claim 16, wherein an electric power supply line is arranged on said common processing circuit.

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23. An apparatus according to claim 1, further comprising a scintillator plate and fiber optic plate provided in front of the image pickup region.

24. An apparatus according to claim 16, further comprising a scintillator plate and fiber optic plate

provided in front of said image pickup region.

25. An apparatus according to claim 23, further comprising:

- 5 a signal processing circuit adapted to process a
signal from said image pickup region;
 a recording circuit adapted to record a signal
from said signal processing circuit;
 a display circuit adapted to display the signal
10 from said signal processing circuit; and
 a radiation source adapted to generate radiation.

26. An apparatus according to claim 24, further comprising:

- 15 a signal processing circuit adapted to process a
signal from said image pickup region;
 a recording circuit adapted to record a signal
from said signal processing circuit;
 a display circuit adapted to display the signal
20 from said signal processing circuit; and
 a radiation source adapted to generate radiation.

27. An image pickup apparatus comprising:

- an image pickup region where a plurality of pixels
25 which include photoelectric conversion units are
arranged to pick up an object image by dividing the
object image into a plurality of regions; and

an external terminal or/and protection circuit arranged between the plurality of photoelectric conversion units in said image pickup region.

5 28. An apparatus according to claim 27, wherein said protection circuit comprises a protection resistor.

10 29. An apparatus according to claim 27, wherein said protection circuit comprises a protection diode.

30. An apparatus according to claim 27, wherein said external terminal has a bump.

15 31. An apparatus according to claim 27, wherein said external terminal occupies an entire area per one pixel region.

20 32. An apparatus according to claim 27, wherein said external terminal occupies a partial area per one pixel region.

25 33. An apparatus according to claim 27, wherein said protection circuit occupies an entire area per one pixel region.

34. An apparatus according to claim 27, wherein

46. An image pickup apparatus for dividing an object image into a plurality of regions to form one image, wherein external terminals which are connected to a wiring line sandwiched between boundary sides of first and second regions and are arranged in the first region, are not at the same positions in a direction along the boundary sides as external terminals which are connected to another wiring line sandwiched between the boundary sides and are arranged in the second region.

47. An apparatus according to claim 27, further comprising a scintillator plate and a fiber optic plate.

48. An apparatus according to claim 46, further comprising a scintillator plate and a fiber optic plate.

49. An apparatus according to claim 47, further comprising:

- a signal processing circuit adapted to process a signal from said image pickup region;
- a recording circuit adapted to record a signal from said signal processing circuit;
- a display circuit adapted to display the signal from said signal processing circuit; and

a radiation source adapted to generate radiation.

50. An apparatus according to claim 48, further comprising:

5 a signal processing circuit adapted to process a signal from said image pickup region;

 a recording circuit adapted to record a signal from said signal processing circuit;

 a display circuit adapted to display the signal
10 from said signal processing circuit; and

 a radiation source adapted to generate radiation.